

1. Amendments

The claims and specification have been revised to correct a few minor formal errors, and to specify that the power plate is "embedded" in the outer wall of the housing so that it is coplanar to the outer wall, as illustrated in Figs. 3 and 5.

Because the amendments are either formal in nature, or supported by the original description and drawings, it is respectfully submitted that the amendments do not involve new matter.

2. Rejection of Claims 1-7 Under 35 USC §102(b) in view of U.S. Patent No. 6,268,669 (Wakao)

This rejection is respectfully traversed on the grounds that the Wakao patent fails to disclose or suggest a connection arrangement for a motor in which

- the outer wall of the housing is adapted to incorporate a flat end of a connection circuit "power plate" in a coplanar manner, as recited in claim 1.

Furthermore, Wakao fails to disclose that

- the power plate is a film printed circuit, as recited in claim 2;
- the coplanar power plate end is positioned in an insertion groove, as recited in claims 3 and 7;
- the power plate extends through a cut-out in an annular wall of the bottom board of the housing, as recited in claim 4;
- the power plate extends from a film printed circuit including coils and a drive member, as recited in claim 5 (and shown in Figs. 4 and 5); and
- the film printed circuit including coils and a drive member is received in an annular groove in the housing, as recited in claim 6.

Instead, the Wakao patent teaches a **terminal shaft 62** that extends **transversely** out of the housing for connection with a battery terminal 61. Terminal shaft 62 is fixed by a snap ring

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64 in a cylindrical insulating sleeve 63 which penetrates the side wall of a board case 22 on which circuit board 40 is mounted.

The outwardly extending shaft arrangement is more complicated and more difficult to assemble than the connection arrangement of the claimed invention, which simply involves extending a power plate having connection circuits so that it fits into a groove, and therefore is "embedded," in the outer wall of the housing. In addition, the outwardly extending shaft of Wakao does not have the neat appearance evident in Figs. 3 and 5 of the present application.

Because the Wakao patent does not disclose all elements recited in any of claims 1-7 of the present application, withdrawal of the rejection of claims 1-7 under 35 USC §102(b) is respectfully requested.

Having thus overcome each of the rejections made in the Official Action, withdrawal of the rejections and expedited passage of the application to issue is requested.

Respectfully submitted,

BACON & THOMAS, PLLC

A handwritten signature in black ink, appearing to read 'Bj' followed by a long horizontal stroke.

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APPENDIX A
(Clean Copy Of Amended Claims)

1. (Amended) An electric power connection structure of a direct current motor, comprising:
 - a housing having a bottom board provided with a shaft seat combined with a stator and a circuit board provided with a drive circuit, a rotor having a rotation shaft rotatably mounted in a shaft tube of the stator, the housing at least having an outer wall; and
 - a power plate having a connection circuit, the connection circuit having a first end formed with a connection terminal arranged to be connected to an electric power source, and a second end electrically connected to a drive circuit of the circuit board,
 - wherein a flat end of the power plate is mounted on the outer wall of the housing, and
 - wherein the flat end of the power plate is embedded in and coplanar to the outer wall of the housing.
2. (Amended) The electric power connection structure of a direct current motor as claimed in claim 1, wherein the circuit board is provided with a drive circuit and the power plate is formed by a film printed circuit.
3. (Amended) The electric power connection structure of a direct current motor as claimed in claim 1, wherein the outer wall of the housing is provided with an insertion groove and the power plate is inserted into and positioned in the insertion groove.
5. (Amended) An electric power connection structure of a direct current motor, comprising:
 - a housing having a shaft seat, a rotor having a rotation shaft having one end rotatably mounted in the shaft seat, the housing at least having an outer wall; and
 - a film printed circuit provided with multiple coils and a sensing drive member, the film printed circuit including a power plate extending from the film printed circuit, the power plate being provided with connection terminals arranged to be connected to an electric power source,
 - wherein a flat end of the power plate is mounted on the outer wall of the housing, and

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wherein the flat end of the power plate is embedded in and coplanar to the outer wall of the housing.

7. (Amended) The electric power connection structure of a direct current motor as claimed in claim 5, wherein the outer wall of the housing is provided with an insertion groove and the power plate of the film printed circuit is inserted into and positioned in the insertion groove.

APPENDIX B
(Marked-Up Copy Of Amended Claims)

1. (Amended) An electric power connection structure of a direct current motor, comprising:
a housing[,] having a bottom board provided with a shaft seat combined with a stator and a circuit board provided with a drive circuit, a rotor having a rotation shaft rotatably mounted in a shaft tube of the stator, the housing at least having an outer wall; and
a power plate having a connection [circuits] circuit, the connection circuit having a first end formed with a connection terminal [that may] arranged to be connected to an electric power source, and a second end electrically connected to [an] a drive circuit of the circuit board, [and]
wherein a flat end of the power plate is mounted on the outer wall of the housing, and
wherein the flat end of the power plate is embedded in and coplanar to the outer wall of the housing.
2. (Amended) The electric power connection structure of a direct current motor as claimed in claim 1, wherein the circuit board is provided with a drive circuit and the power plate [may be] is formed by a film printed circuit.
3. (Amended) The electric power connection structure of a direct current motor as claimed in claim 1, wherein the outer wall of the housing is provided with an insertion groove [so that] and the power plate [may be] is inserted into and positioned in the insertion groove.
5. (Amended) An electric power connection structure of a direct current motor, comprising:
a housing[,] having a shaft seat, a rotor having a rotation shaft having one end rotatably mounted in the shaft seat, the housing at least having an outer wall; and
a film printed circuit[,] provided with multiple coils and a sensing drive member, the film printed circuit [protruded with] including a power plate [which is] extending from the film printed circuit, the power plate being provided with connection terminals [that may] arranged to be connected to an electric power source, [and]
wherein a flat end of the power plate is mounted on the outer wall of the housing, and

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wherein the flat end of the power plate is embedded in and coplanar to the outer wall of the housing.

7. (Amended) The electric power connection structure of a direct current motor as claimed in claim 5, wherein the outer wall of the housing is provided with an insertion groove [so that] and the power plate of the film printed circuit [may be] is inserted into and positioned in the insertion groove.

APPENDIX C
(Clean Copy Of Amended Paragraphs)

Page 3, line 16 to Page 4, line 4:

Referring to the drawings and initially to Fig. 1, a direct current motor 1 in accordance with a first embodiment of the present invention comprises a housing 10 having a bottom board 11 provided with a shaft seat 12 combined with a shaft tube 14 of a stator 13. A rotor 15 has a rotation shaft 16 rotatably mounted in the shaft tube 14. The housing 10 has an outer wall provided with a power plate 2. The power plate 2 includes connection circuits 21. The connection circuits 21 each has a first end formed with a connection terminal 22 that may be connected to the electric power source, and a second end electrically connected to a circuit board 131 (see Fig. 3) that has a drive circuit. In the preferred embodiment, the power plate 2 and the circuit board 131 of the present invention may be formed by the same film printed circuit. In addition, the outer wall of the housing 10 may be provided with an insertion groove 17 so that the power plate 2 may be inserted into and positioned in the insertion groove 17. If necessary, the bottom board 11 of the housing 10 has an annular wall 111 which is provided with a cutout 112 for passage of the connection circuit 21.

Page 4, lines 5-16:

Referring to Figs. 2 and 3, the direct current motor 1 in accordance with the first embodiment of the present invention is assembled. The circuit board 131 of the motor 1 is connected with the connection circuit 21 of the power plate 2 which is passed through the cutout 112 of the bottom board 11 of the housing 10. The power plate 2 may be inserted into and positioned in the insertion groove 17 of the housing 10. The connection terminal 22 of the power plate 2 may be connected to the electric power. Thus, the circuit board 131 having power plate 2 may be inserted into and positioned in the insertion groove 17 of the housing 10, thereby embedding the power plate 2 in the outer wall of the housing so that it is coplanar to the outer wall. Thus, the motor 1 does not have electric cords that are protruded outward from the housing 10, and does not have electric cords that are detached due to a pulling force.

Page 4, line 17 to Page 5, line 2:

Referring to Fig. 4, a direct current motor 4 in accordance with a second embodiment of the present invention comprises a housing 40 provided with a shaft seat 41. A rotor 42 has a rotation shaft 43 having a first end rotatably mounted in the shaft seat 41, and a second end pivoted on a cover plate 44. The wall of the housing has an annular groove 45 for receiving a film printed circuit 5. A power plate 50 extends from the film printed circuit 5, and the film printed circuit 5 is provided with multiple coils 51 and a sensing drive member (not shown). The power plate 50 is provided with connection terminals 22 that may be connected to the electric power. The power plate 50 is protruded outward from the annular groove 45, and is bent and bonded on the outer wall of the housing 40. In the preferred embodiment, the outer wall of the housing 40 may be provided with an insertion groove 46 so that the power plate 50 may be inserted into and positioned in the insertion groove 46.

APPENDIX D
(Marked-Up Copy Of Amended Paragraphs)

Page 3, line 16 to Page 4, line 4:

Referring to the drawings and initially to Fig. 1, a direct current motor 1 in accordance with a first embodiment of the present invention comprises a housing 10 having a bottom board 11 provided with a shaft seat 12 combined with a shaft tube 14 of a stator 13. A rotor 15 has a rotation shaft 16 rotatably mounted in the shaft tube 14. The housing 10 has an outer wall provided with a power plate 2. The power plate 2 includes connection circuits 21. The connection [circuit] circuits 21 each has a first end formed with a connection terminal 22 that may be connected to the electric power source, and a second end electrically connected to a circuit board 131 (see Fig. 3) that has [an] a drive circuit. In the preferred embodiment, the power plate 2 and the circuit board 131 of the present invention may be formed by the same film printed circuit. In addition, the outer wall of the housing 10 may be provided with an insertion groove 17 so that the power plate 2 may be inserted into and positioned in the insertion groove 17. If necessary, the bottom board 11 of the housing 10 has an annular wall 111 which is provided with a cutout 112 for passage of the connection circuit 21.

Page 4, lines 5-16:

Referring to Figs. 2 and 3, the direct current motor 1 in accordance with the first embodiment of the present invention is assembled. The circuit board 131 of the motor 1 is connected with the connection circuit 21 of the power plate 2 which is passed through the cutout 112 of the bottom board 11 of the housing 10. The power plate 2 may be inserted into and positioned in the insertion groove 17 of the housing 10. The connection terminal 22 of the power plate 2 may be connected to the electric power. Thus, the circuit board 131 having [an] a drive circuit may be electrically connected to the connection circuit 21 of the power plate 2, and power plate 2 may be inserted into and positioned in the insertion groove 17 of the housing 10, thereby embedding the power plate 2 in the outer wall of the housing so that it is coplanar to the outer wall. Thus, the motor 1 does not have electric cords that are protruded outward from the housing 10, and does not have electric cords that are detached due to a pulling force.

Page 4, line 17 to Page 5, line 2:

Referring to Fig. 4, a direct current motor 4 in accordance with a second embodiment of the present invention comprises a housing 40 provided with a shaft seat [42] 41. A rotor 42 has a rotation shaft 43 having a first end rotatably mounted in the shaft seat 41, and a second end pivoted on a cover plate 44. The wall of the housing has an annular groove 45 for receiving a film printed circuit 5. [The] A power plate 50 extends from the film printed circuit 5 [is protruded with a power plate 50], and the film printed circuit 5 is provided with multiple coils 51 and a sensing drive member (not shown). The power plate 50 is provided with connection terminals 22 that may be connected to the electric power. The power plate 50 is protruded outward from the annular groove 45, and is bent and bonded on the outer wall of the housing 40. In the preferred embodiment, the outer wall of the housing 40 may be provided with an insertion groove 46 so that the poewr plate 50 may be inserted into and positioned in the insertion groove 46.